RUDKIVSKIY, G.P. [Rudkivs'kyi, H.P.], kand.biolog.nauk

Blackthorn nectarine. Nauka i zhittia 11 no.10:38-39 O '61.
(Blackthorn) (Nectarine)

RUDKIVS'KIY, G.P.

Cultivation of fruit trees without transplanting as a way of increasing their drought resistance and winter hardiness. Visnyk AN URSR 28 no.9:53-56 S '57. (MIRA 11:1)
(Fruit culture)

RUDKIVS'KYI, H. F.

Peach - Ukraine

Creating new frost-resistant varieties of peaches in the Ukraine.
Visnyk AN URSR 24 no. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

1. RUDNITSKIY, M. P.

2. USSR (600)

4. Ukraine - Peach

7. Creating new frost-resistant varieties of peaches in the Ukraine. Visnyk AN URSR, 24, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

IL'CHENKO, P.F., inzhener.; RUD'KO, A.A., inzhener.

Device for parquet floors on a woodless base. Transp. stroi. 5 no.10:17-19 D '55. (MLRA 9:3)
(Parquet floors)

RUD'KO, A. K. , BORODACHEK, V. YA. AND KULIK, L. M.

"Approximation solution of thermal conductivity equations for laminar-uniform media."

Report presented at the 1st All-Union Conference on Heat- and Mass-Exchange, Minsk, BSSR, 5-9 June 1961.

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SOV/124-59-9-9799

11.1000
Translation from: Referativnyy zhurnal, Mekhanika, 1959, Nr 9, p 31 (USSR)

AUTHOR: Rud'ko, A.K.

TITLE: The Concentration Limits of Flame Propagation Within a Laminar Two-Phase Mixture

PERIODICAL: V sb.: Goreniye dvukhfaznykh sistem. Moscow, AS USSR, 1958, pp 26 - 49

ABSTRACT: The author divides, for performing a theoretical investigation, the front of flame propagating within a two-phase mixture into three zones: the heating zone, the zone of kinetic combustion of the evaporated fuel, and the zone of diffusion-combustion of the fuel droplets. The heat flux, transferred from the more heated zone of diffusion-combustion into the zone of kinetic combustion, causes an increasing in the propagation rate of the flame and a widening of the concentration limits of ignition of the two-phase mixture in comparison with a homogeneous mixture, in which the maximum temperature of the flame is equal to the temperature at the boundary of the kinetic zone and the

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The Concentration Limits of Flame Propagation Within a Laminar Two-Phase Mixture

diffusion zone of the two-phase mixture. The heat flux from the burning vapor phase in the kinetic zone to the fuel droplets causes inhibition of the chemical reaction of the vapor phase combustion. On the basis of these ideas, the author determines theoretically the concentration limits of the ignition of a two-phase mixture of ethyl alcohol and air for different concentration ratios between the liquid and evaporated phases, for different dispersities, pressures, and temperatures. The experimental investigation confirmed the fundamental conclusions of the theory: 1) The upper concentration limit of ignition of the two-phase mixtures for the stoichiometric composition of the vapor phase is 3 - 4 times higher than for a homogeneous mixture, if the mean diameter of droplets is not below 100 μ. 2) Fine-dispersed mixtures ignite even at zero-concentrations of the fuel within the vapor phase, but for the ignition of coarse-dispersed mixtures, a definite minimum concentration of evaporated fuel is necessary. 3) If the concentration of the evaporated fuel within a two-phase mixture exceeds the upper concentration limit of the homogen mixture, the two-phase mixture does not ignite. 4) At increasing temperature or pressure, the concentration limits of the two-phase mixture somewhat widen.

Card 2/2

L.S. Dmitriyev

SOV/123-59-23-99226

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 23, p 375 (USSR)

AUTHOR: Rud'ko, A.K.

TITLE: Concentration Limits of Flame Propagation in Laminar Two-Phase Mixtures

PERIODICAL: V sb.: Goreniye dvukhfazn. sistem, Moscow, AS USSR, 1958, pp 26 - 49

ABSTRACT: An example is presented of solving the problem of inflammability limits of laminar drop mixtures. The test results obtained for the drop mixture of ethyl alcohol with air confirmed the basic conclusions of the theory. The inflammability limits of drop mixtures can essentially differ from those of homogeneous gas mixtures. The evaporability of the liquid medium considerably affects the limits; these limits are considerably narrowed down with a cooling of the mixture and a pressure reduction. In consideration of the fact that in practice not laminar but turbulent mixture flows are used, it would be very interesting to continue the investigation in application to the combustion of turbulent drop mixtures. Thirteen figures, 5 references.

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RUBR. A K

11(1) P-4 PHASE I BOOK EXPLOITATION SOV/1372

Akademiya nauk SSSR. Energeticheskiy institut

Goreniye dvukhfaznykh sistem; sbornik dokladov na obshchemoskovskom seminare po goreniyu pri Energeticheskom institute AN SSSR (Combustion of Two-phase Systems; Collection of Reports of the All-Moscow Seminar on Combustion at the U.S.S.R. Academy of Sciences, Power Institute) Moscow, Izd-vo AN SSSR, 1958. 123 p. 3,200 copies printed.

Resp. Ed.: Khitrin, L.N., Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: Meleyev, A.S.; Tech. Ed.: Kashina, P.S.; Council of the Seminar: Khitrin, L.N., Corresponding Member, USSR Academy of Sciences (Chairman); Knorre, G.F., Doctor of Technical Sciences, Honored Worker in Science and Technology, Professor, Deputy Chairman; Shchetnikov, Ye.S., Doctor of Technical Sciences, Professor Deputy Chairman); Vanichev, A.P., Doctor of Technical Sciences; Voyevodskiy, V.V., Corresponding Member, USSR Academy of Sciences; Golovanov, N.V., Candidate of Chemical Sciences; Zhuk, D.S., Candidate of Chemical Sciences; Inozemtsev, N.V., Doctor of Technical Sciences, Honored Worker in Science and Technology, Professor; Kantorovich, B.V., Doctor of Technical Sciences; Kogarko, S.M., Doctor of Chemical Sciences; Lebedev, B.N.,

Card 1/6

Candidate of Technical Sciences; Nikitin, K.A., Candidate of Technical Sciences; Sokolik, A.S., Doctor of Chemical Sciences; Golovina, Ye.S., Candidate of Technical Sciences (Secretary).

PURPOSE: This collection of articles is intended for scientists working in the field of combustion.

COVERAGE: This is the first issue of proceedings of the Moskovskiy seminar po voprosam goreniya (Moscow seminar on problems of combustion). It is devoted to problems of ignition and combustion processes in two-phase liquid-vapor fuel systems, and to the general characteristics of combustion in a fuel stream. The papers published in this number were presented at the seminar in 1955/56.

TABLE OF CONTENTS:

The paper discusses the combustion of fuel droplets from the point of view of the diffusion theory of G.A. Varshavskiy [2]. The following characteristics are determined: rate of combustion, radius of the combustion zone, droplet and combustion zone temperatures, temperature areas and partial pressures around the droplet. Two methods were used: 1) combustion of large model droplets in a spherical burner (Fig. 2), 2) combustion of droplets suspended from a filament. Data were calculated for the following fuels: kerosene, benzene, isooctane, and ethyl alcohol. It was determined that the rates of burning for benzene and isooctane are similar. The rate for kerosene is on the average 25 per cent lower than for benzene, and the rate for alcohol is lower than for kerosene. The theoretical and observed temperatures of the droplets show close values, with the observed temperatures lower than the boiling points of fuel for all pressures of air. Photographs of isooctane droplets burning at various air pressures show that the pressure drop results in the flame front receding from the droplet surface and in the change of the flame form to spherical. Natural convection for droplets 100 - 200 is negligible. There are 9 figures, 2 tables, and 5 references, 2 of which are Soviet and 3 English.

Tikhomirov, V.G. Fundamental Combustion Characteristics of a Two-phase Fuel-air Mixture (October 14, 1955) 19

The paper discusses the fundamental combustion characteristics of two-phase fuel-air mixtures in a turbulent flow. A method was devised for the study of a predetermined sector of the flow with a given droplet size, and mixture composition. Flame propagation in such mixtures is due to heat flow from the burning droplets towards nonburning droplets in a medium which does not necessarily contain a combustible fuel-vapor concentration. It was determined that injection of atomized fuel into the air stream adds to the turbulence of this stream. The rate of flame propagation is modified by the turbulence of the flow. The time of combustion of the two-phase mixture, which is the time during which the components of the mixture remain in the combustion zone, has a higher value than that for a homogeneous mixture, especially for low turbulence of the stream. There are 4 figures and 5 references, 4 of which are Soviet and 1 English.

Rud'ko, A.K. Concentration Limits of Flame Propagation in a Laminar Two-phase Mixture (November 25, 1955)

The author presents the approximate solution for the problem of normal propagation and concentration limits of flame propagation in laminar two-phase fuel-air mixtures. The results are compared with experimental data obtained from the study of concentration limits of flame propagation (with spark ignition) in air-alcohol droplet mixtures with a flow rate below 0.5 m/sec. It was determined that there exists a satisfactory agreement of the experimental data with the theoretical. The two-phase mixtures show an expanded concentration range of the combustible mixture. The deterioration of dispersivity over a certain limit in mixtures with a low content of vaporized fuel results in a nonflammable mixture for any summary concentration of the fuel. The concentration limits of inflammability become narrower during the cooling of the mixture and during a temperature drop. There are 13 figures and 5 references, 4 of which are Soviet and 1 English.

Kantorovich, B.V. Problems in the Theory of Combustion of a Fuel Stream (June 13, 1956) 50

This paper presents theoretical and experimental considerations on the combustion processes occurring in a stream of fuel (pulverized, liquid, and gaseous). The essential differences between the streams of various fuels are indicated in the article. Solid fuels: coal ARSh from the Donets Coal Basin, coal from the Kuznetsk Basin, Chelyabinsk Basin and the Moscow Basin; peat, petroleum coke. Liquid fuels: Diesel oil, ethyl alcohol. The basic equations describing the combustion process are: 1) the stoichiometric equation of mass transfer 3) the equation of state of the gas medium 4) energy equation, and 5) the kinetic equation. Atomized liquid fuels require an additional equation for the evaporization of fuel particles. There are 33 figures, 223 equations, and 40 references, 37 of which are Soviet and 3 English.

AVAILABLE: Library of Congress

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PILYUGIN, G.T.; CHERNYUK, I.N.; RUD'KO, A.P.

Synthetic dyes. Part 52: Styryls from N-aryl quinaldinium salt derivatives. Zhur. org. khim. 1 no.9:1685-1687 S '65.
(MIRA 18:12)

1. Chernovitskiy gosudarstvennyy universitet. Submitted August 8, 1964.

RUD'KO, B.F.

rnotoelectric attachment for a spectrograph. Visnyk Kyiv.un.no.2. Ser.fiz.ta khim. no.1:75-78 '59. (MIRA 14:8)
(Spectrograph)

BELYY, M.U.[Bilyi,M.U.]; RUD'KO, B.F. [Rud'ko, B.F.]

Effect of temperature on the luminescence and absorption spectra of solutions of heavy metal salts. Part 1: Study of solutions of lead and thallium salts. Ukr. fiz. zhur. 5 no.6:799-808 N-D '60. (MIRA 14:3)

1. Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko.
(Lead salts--Spectra) (Thallium salts--Spectra)

...LYY, M.U.; RUD'KO, B.F.

Temperature studies of the luminescence of halide solutions of heavy metals. Izv.AN SSSR.Ser.fiz. 24 no.5:582-586 My '60. (MIRA 13:5)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Halides--Optical properties)

S/048/61/025/003/043/047
B104/B203

AUTHORS: Belyy, M. U., Okhrimenko, B. A., and Rud'ko, B. F.

TITLE: Recombination luminescence of Sn^{4+} in aqueous solution of LiCl and HCl at low temperatures

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 426-428

TEXT: This paper was read at the 9th Conference on Luminescence (Crystal Phosphors) in Kiyev, June 20-25, 1960. It is known that the optical characteristics of alkali-halide crystal phosphors and certain concentrated solutions have much in common: the absorption spectra are in practical agreement, and the luminescence spectra have also certain correspondences. Hence, the authors conclude that a study of concentrated halide solutions containing heavy metal ions might help to clarify absorption and luminescence mechanisms. It has been found earlier that a red luminescent band could be observed in a solution of Sn^{++} in LiCl(HCl) on reduction of temperature. The luminescence spectrum of this solution at the temperature of liquid oxygen consists of a blue band (λ_{max} = 440 mμ)

and a red band (Curve 3 of the figure). The present paper deals with the origin of this band. It was found to have three maxima: 585 mμ, 605 mμ, and 635 mμ. Further, it was stated that these two bands were excited in different parts of the absorption spectrum: the blue one at the absorption maximum of 226 mμ, and the red one in the region of two distinct maxima at 262 mμ and 276 mμ. Fig. 1 shows the absorption and luminescence spectra of two solutions. It was found that the absorption spectra of these solutions did not shift on reduction of temperature, only undergoing a slight contraction and elevation of the bands. It was further shown that the absorption spectra of the two solutions had a distinct maximum at 226 mμ, and two less distinct maxima at 260 mμ and 276 mμ. The luminescence spectrum of the solution Sn^{4+} + LiCl(HCl) had only a red band. It is assumed that the longwave absorption maximum of the solution Sn^{++} + LiCl(HCl) is caused by the transitions $^1S_0 \longrightarrow {}^3P_{0,1,2}$. This, however, also clarifies the triplet structure of the red luminescent band of Sn^{++}. The similar structure of the red luminescent band of Sn^{4+} solutions is explained by the same transitions in the Sn^{4+} ion as above,

Recombination luminescence of...

since they also give a red luminescent band of the Sn^{4+} ion. This interpretation is confirmed by the agreement of maxima of the excitation spectrum calculated from formula

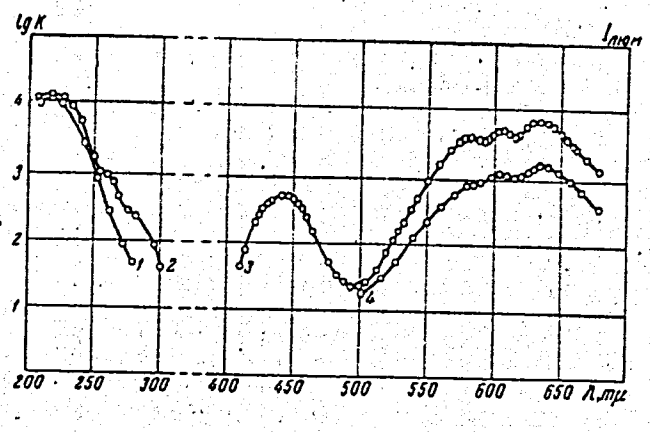
$$I_{люм} = I_0 \frac{\alpha C_0 C_x K_x}{K_x C_x + K_0 C_0} [1 - e^{-(K_x C_x + K_0 C_0)d}], \quad (1)$$

with the ones found experimentally. Here, $I_{люм}$ and I_0 are the intensity of luminescence and the intensity of the exciting light, α is the probability of a recombination of an electron and of an Sn^{4+} ion, K_x, K_0, C_x, and C_0 are absorption coefficients and concentrations of the Cl^- and Sn^{4+} ions, and d is the thickness of the absorbing layer. It was shown that $I_{люм}$ reached a maximum at $K_0/K_x = C_x^2/C_0^2$. In a subsequent discussion, Ch. B. Lushchik dealt with electron transitions causing absorption in activated crystals. There are 1 figure and 2 Soviet-bloc references.

ASSOCIATION: Kafedra optiki Kiyevskogo Gos. universiteta im.T. G. Shevchenko (Department of Optics of the Kiyev State University imeni T. G. Shevchenko)

Recombination luminescence of...

Legend to Fig. 1:
Absorption spectra (Curves 1, 2) and luminescence spectra (Curves 3, 4) of the solutions Sn^{4+} + LiCl(HCl) (Curves 1, 4) and Sn^{2+} + LiCl(HCl) (Curves 2, 3).



Card 4/4

STRUCTURE AND PHYSICAL PROPERTIES OF MATTER IN A LIQUID STATE
reports read at the 4th Conference convened in KIYEV from 1 to 5 June 1959, published by the publishein House of KIYEV University, KIYEV, USSR, 1962

RUD'KO, F.

Incorporate the search results of everyone into a common plan. Sov. profsoiuzy 19 no.24:18-19 D '63. (MIRA 17:1)

1. Predsedatel' zavodskogo komiteta professional'nogo soyuza Kurskogo zavoda traktornykh zapasnykh chastey.

AID P - 4624

Subject : USSR/Aeronautics - maintenance

Card 1/1 Pub. 135 - 13/23

Author : Rud'ko, G. A., Eng.-Maj.

Title : Technical maintenance of electrical equipment

Periodical : Vest. vozd. flota, 4, 65-68, Ap 1956

Abstract : The inspection, checking and maintenance of various electrical equipment of aircraft is described in detail. The article is of informative value.

Institution : None

Submitted : No date

IVANOVA, A.M.; MEKLER, S.Z.; RUD'KO, I.S.

Our experience in the use of polyglutsin. Zdrav.Belor. 4 no.3:50-51 Mr '58. (MIRA 13:7)

1. Iz khirurgicheskoy kliniki Vitebskogo meditsinskogo instituta (direktor I.I. Bogdanovich) i Vitebskoy oblastnoy stantsii perelivaniya krovi (direktor S.Z. Mekler, rukovoditel' raboty - dots. A.Ya. Mitroshenko).
(BLOOD PLASMA SUBSTITUTES)

MEKLER, S.Z.; IVANOVA, A.M.; KORENEVICH, N.N.; BUD'KO, I.S.

Use of TSOLIPK protein hydrolysate in surgical diseases. Zdrav. Bel. 7 no.8:57-58 Ag '61. (MIRA 15:2)

1. Iz Vitebskoy oblastnoy stantsii perelivaniya krovi (dir. - S.Z.Mekler).

(BLOOD PLASMA SUBSTITUTES) (SURGERY)

IVANOVA, A.M.; KERENEVICH, N.N.; MEKLER, S.Z.; RUD'KO, I.S.

Experience in the use of the heterogenic blood substitute BK-8 in surgical practice. Probl. gemat.i perel. krovi 6 no.1:54-56 '61. (MIRA 14:2)

(BLOOD PLASMA SUBSTITUTES)

RUDKO, N.; BLAUS, I., red.; CAKSS, J., tekhn. red.

[Vilani; guidebook for Vilani and its environs] Vilani; turisma celvedis pa Vilaniem un to apkartni. Riga, Latvijas Valsts izdevnieciba, 1962. 84 p. (MIRA 15:3)
(Vilani--Guidebooks)

RUD'KO, P.D.

[Variations in the morphologic structure of farm animals as affected by their care and use] Izmenenie morfologicheskoi struktury sel'skokhoziaistvennykh zhivotnykh pod vliianiem soderzhaniia i ekspluatatsii. Stalinabad, Tadzhikskii sel'khoz. in-t, 1958. 263 p. (MIRA 14:12)
(Morphology (Animals)) (Stock and stockbreeding)

RUD'KO, P.I., GRES M., redaktor; GORODNICHA, A., tekhnicheskiy redaktor.

[Thus the victory was won; account by the director of the L'vov Stakhanov low-voltage electric lamps factory] Tak zdobuvalas' peremoha. Rozpovid' dyrektora L'vivs'koho stakhanovs'koho zavodu nyz'kovol'tnykh elektrolamp. L'viv, Knizhkovo-zhurnal'na vyd'vo, 1952. 60 p. (MLRA 8:2)
(Lvov--Electric lamps)

RUD'KO, M.P.

Ivan Franko's ties with Kiev. Nauk.zap.Kiev.un. 15 no.8:127-132 '56. (MLRA 10:7)
(Franko, Ivan, 1856-1916)

3444
S/185/61/006/006/009/030
D299/D304

24.3500

AUTHORS: Horban', I.S., and Rud'ko, S.M.

TITLE: Absorption- and luminescence spectra of HgJ_2 crystals

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961, 764 - 767

TEXT: Exciton theory in the effective-mass approximation is considered for the case of non-hydrogenic exciton spectra, as well as the following related problems: Transformation of exciton-excitation energy into radiation (due to direct transitions from exciton levels), conditions for transitions without radiation, and the interaction between exciton excitation and lattice defects. The absorption- and luminescence spectra were measured at temperatures of 20, 77 and 100°K. The luminescence was studied on single crystals, whereas the absorption spectra were studied on polycrystalline specimens. A figure shows the obtained spectra. The high values of the absorption coefficients (10^4 cm^{-1}) and the obtained reproducibility of data for various specimens, show that the absorption spectrum is

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Absorption- and luminescence ...

of crystalline type. The high values of the absorption coefficients show that the corresponding optical transitions are direct allowed transitions. The spectral band of longest wavelength corresponds to transitions to the lowest exciton-state. It is important to calculate the oscillator strength f for this band; it was found that $f = 6 \cdot 10^{-4}$ to $4 \cdot 10^{-4}$ (for temperatures between 20 and 100°K). Knowing f, it is possible to determine the dissociation energy of excitons $G_{exc.}$; this was found to be 0.14 - 0.17 ev., very close to the values of the spectral distance (0.14 - 0.15 ev) between the maximum of the band and the beginning of the continuous absorption (which increases sharply in the shortwave side of the measured spectrum). The obtained results lead to the conclusion that the continuous absorption is due to interzone transitions. Knowing f, it is also possible to determine the order of magnitude of the diameter of exciton excitation and its reduced effective mass. Another figure shows the energy distribution in the luminescence spectrum, which has 2 bands, corresponding to transitions between exciton states and to luminescence of local centers. The experimentally measured lifetime of excitons and the caluclated one differed by an or-

der of magnitude. (This discrepancy is explained). By extending the above considerations to the ratios of luminescence-band intensities, it is possible to quantitatively determine the efficiency of radiationless transitions, of exciton radiation, and of exciton energy transfer to local centers. The obtained experimental results are proof of the great significance of exciton processes in the transformation of the excitation energy of HgJ_2 crystals, into luminescence. There are 2 figures and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc (including 1 translation). The references to the English-language publications read as follows: R.G. Elliot, Phys. Rev., 108, 6, 1957; D.L. Dexter, Phys. Rev., 101, 48, 1956; T. Moss Photocond. in ebm., London, 1952.

ASSOCIATION: Kyyivs'kyy derzhuniversytet im. T.H. Shevchenka (Kyyiv State University im. T.H. Shevchenko)

S/185/60/005/003/016/020
D274/D303

26600

6.3300

AUTHORS: Gorban', I.S., Rud'ko, S.M. and Shyshlovs'kyy, O.A.

TITLE: Wavelength-independence of quantum yield of infrared Cu_2O-luminescence during excitation in the region of exciton absorption spectra

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 3, 1960, 420-422

TEXT: The dependence is studied of the intensity of infrared luminescence of Cu_2O on the wavelength during excitation in the region of the yellow and green hydrogenic series. In literature, there is no common viewpoint regarding the mechanism of excitation-energy transmission to the local impurity-centers which cause the luminescence. A quantitative study of the Cu_2O absorption-spectrum at liquid-air temperature, showed that the long-wave edge of the eigenabsorption band has a complex structure. In the present study, a lamp of 300 watt was used as a light source. Then the light passed

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through a monochromator and onto a photomultiplier whose signal was amplified and recorded by electronic potentiometer PSP-1. The measurements were conducted at liquid-air temperature. A figure shows the intensity plotted vs. wavelength (in Å). The spectrum was obtained from a specimen 50 μ thick. From the figure it is evident that stronger luminescence corresponds to greater absorption. It was established that the dependence of luminescence on wavelength does not have a structure corresponding to the narrow hydrogenic series of exciton absorption. The investigation shows that the intensity of luminescence does not depend on the nature of the exciting light. The processes involved in the luminescence can be explained by assuming an exciton mechanism of energy transmission to the luminescence centers. Excitation by carriers is likely owing to the size of the exciton radius. The lifetime of the carriers in the conduction zone is very short; this may be the reason for the small quantum-yield of photoconductivity in Cu_2O which agrees with the results of earlier investigations. In conclusion, the author considers that a complete solution of the problem would

require further experimental results. There is 1 figure and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J. Bloem, Philips Research Reports, 13, no. 2, 167-193, 1958.

ASSOCIATION: Kyyivs'kyy derzhavnyy universytet im. T.G. Shevchenka (Kiyev State University im. T.G. Shevchenko)

SUBMITTED: December 31, 1959

L 13038-63 EWT(l)/EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3 JD/WH/
IJP(C)
ACCESSION NR: AP3000615 S/0181/63/005/005/1368/1372

AUTHOR: Gorban', I. S.; Rud'ko, S. N.

TITLE: Optical properties of silicon-carbide crystals

SOURCE: Fizika tverdogo tela, v. 5, no. 5, 1963, 1368-1372

TOPIC TAGS: absorption band, p-n junction, SiC, absorption edge, direct transition, indirect transition, phonon, luminescence, photoluminescence, silicon-carbide crystal, SiC crystal

ABSTRACT: The authors have investigated the structure of a long-wave edge of the proper absorption band through a wide temperature range for artificial and commercial-grade SiC crystals. The structure of the long-wave edge is determined by indirect transitions in which three types of phonons participate (with energies of 0.04, 0.067, and 0.1 ev). The reflection spectrum of SiC was studied in ultraviolet light, and direct transitions were detected. The energy gap between the extremes represented by direct and indirect transitions is about 1 ev. SiC crystals possess two types of luminescence, one originating in the body of the crystal, the other associated with radiative recombination of carriers within p-n junctions, taking place near the surface. The excitation function of photo-

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L 13038-63
ACCESSION NR: AP3000615

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luminescence indicates that, deep within the absorption band, SiC crystals are characterized by excitations which are free to transfer energy to impurity centers of luminescence until thermodynamic equilibrium is reached in the conduction band. "In conclusion, the authors consider it their pleasant duty to thank S. M. Genkina, S. A. Dobrolezh, and V. Z. Smushkevich for their kindness in furnishing the silicon-carbide crystals used in the investigation." Orig. art. has: 5 figures.

ASSOCIATION: Kiyevskiy gosudarstvenny*y universitet im. T. G. Shevchenko (Kiev State University)

SUBMITTED: 15Sep63 DATE ACQ: 11Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 006 OTHER: 008

Card 2/2

GORBAN', I.S.; GRITSENKO, Yu.I.; RUD'KO, S.N.

Photoluminescence and recombination of current carriers in cuprous oxide crystals. Fiz.tver.tela 3 no.7:2147-2153 Jl '61. (MIRA 14:8)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Cuprous oxide crystals) (Photoelectricity)

S/051/62/012/005/010/021
E032/E414

24 3500

AUTHORS: Gorban', I.S., Rud'ko, S.N.

TITLE: Absorption and photoluminescence spectra of HgI_2 crystals

PERIODICAL: Optika i spektroskopiya, v.12, no.5, 1962, 610-615

TEXT: The spectra were measured at 20, 77 and about 100°K using a mirror spectrometer with a plane diffraction grating. The linear dispersion was about 16 Å/mm. A ФЭУ-17 (FEU-17) photomultiplier was used as the detector. The photoluminescence was measured in single crystals and the absorption spectra were determined for very thin polycrystalline plates. Fig.1 shows the absorption spectrum (3) and the energy distribution in the photoluminescence spectrum (1,2) of the red modification of HgI_2 at 20°K. Curve 2' in this figure shows the peak marked 2 on a larger scale. Fig.2 shows the energy distribution in the photoluminescence spectrum of HgI_2 (I - 20°K, curves a and б are for single crystals (obtained from the vapour phase) and refer to different portions of the original material; curve в represents the luminescence of a crystal grown from solution;

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GORBAN', I.S.; RUD'KO, S.N.

Absorption and photoluminescence spectra of HgI_2 crystals. Opt.i spektr. 12 no.5:610-615 My '62. (MIRA 15:5)
(Mercury Iodide crystals--Spectra)

GORBAN', I.S. [Horban', I.S.]; RUD'KO, S.N. [Rud'ko, S.M.]; SHISHLOVSKIY, A.A. [Shyshlovs'kyi, O.A.]

Independence of the quantum yield of Cu_2O infrared luminescence on the length of the wave upon excitation in the region of the exciton structure of the absorption spectrum. Ukr.fiz.zhur. 5 no.3:420-423 My-Je '60. (MIRA 13:9)

1. Kiyevskiy gosudarstvennyy universtet im.T.G. Shevchenko.
(Spectrum, Infrared) (Copper oxide--Spectra)

89235

S/048/61/025/001/001/031
B029/B067

9.4160 (also 1137,1895)

AUTHORS: Gorban', I. S., Rud'ko, S. N., and Shishlovskiy, A. A.

TITLE: Luminescence of semiconducting crystals on excitation in the region of the discrete structure of the absorption spectrum

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 1, 1961, 6-12

TEXT: According to the authors, the intensity of recently observed short-wave luminescence bands of Cu_2O (Ref. 5) is largely dependent on the production process and the heat treatment of the specimens. Fig. 1 shows luminescence spectra of Cu_2O crystals with different resistivities. The spectra were taken at 20°K and 77°K. The luminescence of Cu_2O crystals is mainly caused by impurity centers. Radiation 1 is caused by copper vacancies, whereas luminescence 2 and 3 are caused by oxygen vacancies. A temperature change strongly reduces the luminescence intensity of the bands in the short-wave region of the spectrum. In Fig. 2, A_1 schematically

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illustrates the ground states of defects of the type of copper vacancies. Levels A_2 and A_3 belong to the centers of the type of oxygen vacancies; m_1 and m_2 are the excited states of the centers. The mechanism of excitation-energy transfer to impurity centers on illumination of the crystal with frequencies of its own bands is essential for the explanation of luminescence and photoconductivity. For this purpose, the authors analyze some experimental data. Fig. 3 illustrates quantitative measurements of the absorption spectrum at liquid-air temperature, i.e., of absorption spectrum (1), excitation spectra of Cu_2O luminescence for radiation 1(2), as well as for bands 2 and 3(3). This can be explained by two mechanisms: 1) excitation energy is transferred to impurity centers by carriers and excitons with the same efficiency. 2) Impurity centers are excited by excitons which are formed directly during light absorption or through conduction bands by interaction of carriers of opposite sign. According to the authors, the second mechanism is more probable. In this connection, reference is made to N. A. Tolstoy's ideas. If $W_{i\Phi} < W_i$, the following

relation holds for the temperature dependence of the exciton lifetime:

$$\tau = \frac{1}{\beta+W_1N_1+(W_2+W_3)N-(W_1-W_{1\Phi})C_1e^{-\varepsilon_1/kT}-(W_2-W_{2\Phi})C_2e^{-\varepsilon_2/kT}-(W_3-W_{3\Phi})C_3e^{-\varepsilon_3/kT}}$$

For the exciton yield of the i-th band $\eta_i = W_i(N_i - C_ie^{-\varepsilon_i/kT})\tau$ holds with i = 1,2,3; N_i denotes the concentration of lattice defects per unit volume; N_i^- is the number of occupied levels; W_i are the probabilities of collision between excitons and vacancies; $W_{i\Phi}$ are the collision probabilities of an exciton with occupied acceptors; β is the decay probability of an exciton without collision with a defect. Furthermore, $N_1^- = C_1e^{-\varepsilon_1/kT}$, $N_2^- = C_2e^{-\varepsilon_2/kT}$, $N_3^- = C_3e^{-\varepsilon_3/kT}$. The conclusions drawn by the authors agree with the experimental results obtained and help to explain some hitherto inexplicable details. The authors then describe luminescence and absorption

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Luminescence of semiconducting crystals S/048/61/025/001/001/031
(Card 4/5) B029/B067

properties of some other crystals. Fig. 4 shows the energy distribution in the two shortest short-wave luminescence bands of HgI_2. The spectral properties of CdS, ZnS, PbI_2 crystals are similar to those of HgI_2.

According to the results obtained, the structure of the excitation spectrum cannot be fully related to the different absorption character. This is the reproduction of a lecture read at the Ninth Conference on Luminescence (Crystal Phosphores), Kiyev, June 20-25, 1960. There are 5 figures, 1 table, and 17 references: 12 Soviet-bloc and 5 non-Soviet-bloc.

Legend to Fig. 4: Low-temperature spectra of HgI_2; A) T = 20°C, B) T = 77°C; curves a and b refer to crystals grown by the sublimation method, в to crystals grown from a solution.

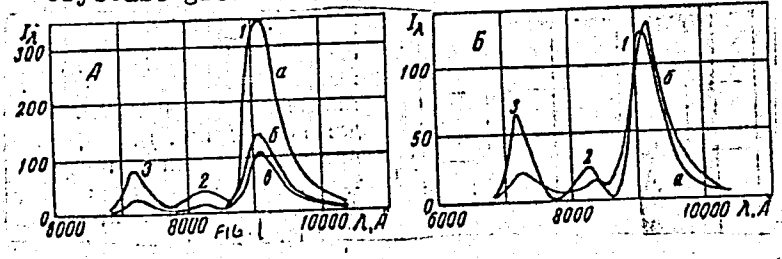

Fig. 1

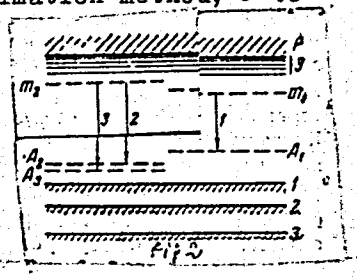

Fig. 2

Luminescence of semiconducting crystals ...

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B029/B067

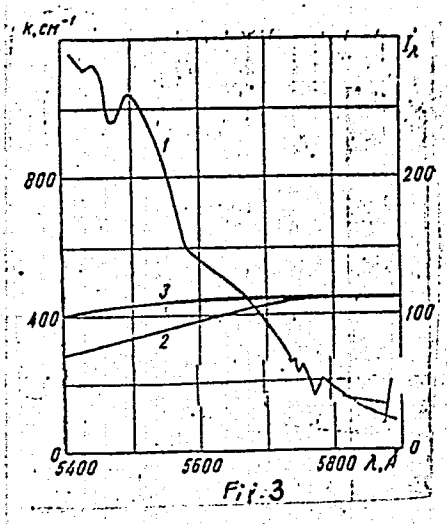

Fig.3

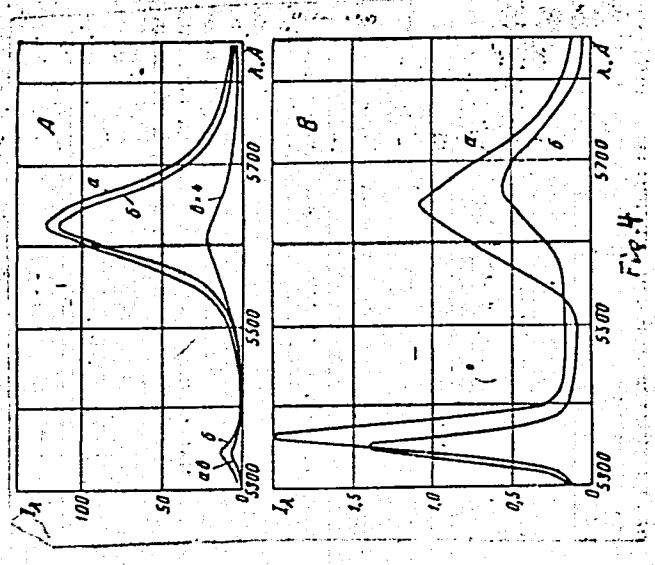

Fig.4

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GORBAN', I.S.; RUD'KO, S.N.

Optical properties of silicon carbide crystals. Fiz.tver.tela 5 no.5:1368-1372 My '63. (MIRA 16:6)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Silicon carbide crystals--Optical properties)

GORBAN', I.S. [Horban', I.S.]; RUD'KO, S.N. [Rud'ko, S.M.]

Absorption spectra and photoluminescence of HgI_2 crystals.
Ukr.fiz.zhur. 6 no.6:764-767 N-D '61. (MIRA 16:5)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Mercury iodide crystals—Spectra) (Luminescence)

GORBAN', I.S. [Horban', I.S.]; GRITSENKO, Yu.I. [Hrytsenko, IU.I.]; RUD'KO, S.N. [Rud'ko, S.M.]

Optical properties of impurity centers and the photoconductivity of copper oxide. Ukr. fiz. zhur. 8 no.1:96-101 Ja '63. (MIRA 16:5)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Color centers--Optical properties)
(Copper oxide--Spectra)
(Photoconductivity)

L 23640-66 EWT(d)/EWP(h)/EWP(1)
ACC NR: AP6009560 (A) SOURCE CODE: UR/0413/66/000/005/0138/0138

35
B

AUTHOR: Rudin, A. D.

ORG: none

TITLE: A vibration conveyer. Class 81, No. 179665

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 138

TOPIC TAGS: conveying equipment, mechanical vibration, electric vibrator, magnetic circuit

ABSTRACT: This Author's Certificate introduces a vibration conveyer with a working element in the form of a pipe which is oscillated by an electromagnetic vibrator consisting of two armatures and a core with ac and dc windings. The effectiveness of the conveyer operation is improved by mounting the core of the vibrator on the end of the pipe along its axis and connecting the armatures to form a system of two magnetic circuits. One of these magnetic circuits, equipped with dc windings, has a larger cross section and a greater number of ampere-turns on its ac coils.

UDC: 621.867-868

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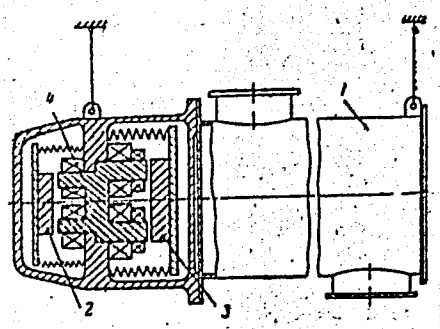
L 23640-66

ACC NR: AP6009560



1--pipe; 2 and 3--armatures; 4--core

SUB CODE: 13/ SUBM DATE: 17Jul63/ ORIG REF: 000/ OTH REF: 000

Card 2/2 dda

RUD'KO, V. F.

"Bone Plastics of the Lower Jaw." Sub 23 Jan 51, Moscow Medical Stomatological Inst, Ministry of Health RSFSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

RUD'KO, V. F.

Skin Grafting

Rapid method of formation and transplantation of Filatov's flap. Stomatologiia no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, Unclassified.

RUD'KO, V.F., dotsent.

Methods used in nasal plastic surgery. Stomatologiia no.6:32-35 '53. (MLRA 7:1)

1. Iz kafedry khirurgicheskoy stomatologii (zaveduyushchiy - professor A.I.Yevdokimov) Moskovskogo meditsinskogo stomatologicheskogo instituta (direktor - dotsent G.N.Beletskiy).
(Nose--Surgery) (Surgery, Plastic)

RUD'KO, V.F., dotsent

First conference of stomatologists in Pyongyang. Stomatologiia 35 no.1:66 Ja-F '56. (MLRA 9:6)
(KOREA, NORTH--STOMATOLOGY)

RUD'KO, V.F., dotsent; KASPAROVA, N.N., kandidat meditsinskikh nauk

Surgical treatment of ankylosis of the temporomandibular joint.
Stomatologiia 35 no.5:24-27 S-O '56 (MLRA 10:4)

1. Iz kafedry khirurgicheskoy stomatologii (zav.-prof. A.I. Yevdokomov) Moskovskogo meditsinskogo stomatologicheskogo instituta (dir.-dotsent G.N. Beletskiy)
(TEMPOROMANDIBULAR JOINT--ANKYLOSIS)

RUD'KO, V.F., dotsent

Parodontitis; pyorrhea alveolaris. Zdorov'e 3 no.4:18-19 Ap '57
(MLRA 10:5)

(GUMS--DISEASES)

RUD'KO, V.F., dotsent

A symposium on plastic surgery and the congress of Czechoslovakian stomatologists. Stomatologiia 36 no.4:60-63 Jl-Ag '57. (MIRA 10:11)
(SURGERY, PLASTIC)

RUD'KO, V.F., dots.

Dental care for children in certain West European countries; based on material from the Brussels conference of a group of experts from the World Health Organization, February 3-7, 1958. Stomatologiia 37 no.4:25-28 Jl-Ag '58 (MIRA 11:9)
(PEDODONTIA)

RUD'KO, V.F., dotsent

Planned improvement in oral hygiene in children is the basic task of stomatology. Stomatologiia 38 no.5:3-9 S-O '59. (MIRA 13:3)

1. Glavnyy stomatolog Ministerstva zdravookhraneniya SSSR.
(MOUTH--CARE AND HYGIENE)

RUD'KO, V.F.; SOKOLOV, M.M. [deceased]; KOSTYLEVA, S.G.

High speed turbine drill; preliminary report. Trudy NIIEKHAI no.5:285-287 '61. (MIRA 15:8)

1. Iz Moskovskogo meditsinskogo stomatologicheskogo instituta i Nauchno-issledovatel'skogo instituta eksperimental'noy khirurgicheskoy apparatury i instrumentov.
(DENTAL INSTRUMENTS AND APPARATUS)

BELETSKIY, G.N. (Moskva); RUD'KO, V.F.

Urgent problems in the development of stomatological care. Sov. zdrav. 20 no.10:28-33 '61. (MIRA 14:9)

1. Direktor Moskovskogo meditsinskogo stomatologicheskogo instituta (for Beletskiy). 2. Glavnyy stomatolog Ministerstva zdravookhraneniya SSSR (for Rud'ko).

(STOMATOLOGY)

RUD'KO, V.F.

Notes on stomatology in Great Britain. No.3: Scientific research in the field of stomatology. Stomatologiia 41 no.5:86-89 S-O '62. (MIRA 16:4)

(GREAT BRITAIN--STOMATOLOGY)

KUD'KO, V.F., dotsent

Principles and method of the study of the incidence of stomatological diseases. Stomatologiia 43 no.1:9-17 Ja-F'64
(MIRA 17:4)

1. Moskovskiy meditsinskiy stomatologicheskiy institut.

USSR/Farm Animals. - Horses Q-2

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49959

Author : Zhedenov V.N., Rud'ko Ye.F.
Inst : Odessa Farm Institute.
Title : The Shapes and Types of Lungs in Horses

Orig Pub : Tr. Odessk. s.-kh. in-ta, 1955, 7, 19-26

Abstract : On the basis of investigations performed on 32 adult horses, the weights of the basic left and right lung sections are presented (asymmetric coefficient 1.2). Mainly, attention is drawn to apical outgrowths and branches (proc. apicalis). Based on their development, the author distinguishes 3 types chiefly of symmetrical and several types of asymmetrical lungs. The author establishes a connection between these types and the constitutional types of dry (riding) and damp (transport) horses.

Card : 1/1

MUCHNIK, V.M.; RUD'KO, Yu.S.

Cooling and freezing processes of water drops. Trudy UkrNIGMI no.31:133-134 '62. (MIRA 16:11)

MUCHNIK, V.M.; RUD'KO, Yu.S.

Formation of hoarfrost on frozen drops of water in an electrical field. Izv. AN SSSR. Ser.geofiz. no.10:1450-1452 O '62.
(MIRA 16:2)

1. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut.

(Frost)

RUDKOV, A.K., inzh.

Obtaining a fluxed sinter from deeply crushed concentrates. Stal' 24 no.9:784-787 S '64. (MIRA 17:10)

1. Zavod im. Dzerzhinskogo.

Rudkov, A. K

New Methods of Testing the Mechanical Properties of Sinter. N. Z. Plotkin, G. G. Orsahkin, and A. L. Rudkov. (*Stal'*, 1945, (10), 887–891). [In Russian]. Normal drum tests for evaluating the mechanical properties of sinter are critically discussed and found to give unreliable results. The reasons for this are considered and a new testing procedure is described for which the following advantages are claimed: results are more objective; the test and sieving operations are fully mechanized; the test duration is decreased (10 min) and conditions are improved. The test is based on a shaker and requires 20–40 kg of sinter (lump sizes > 100 mm). A selection of results is presented, including some confirming the beneficial effect of FeO on mechanical properties.—A. K.

3

Dneprodzerzhinsk Metallurgical Inst. and Plant im. Dzerzhinskiy

SOV/137-57-10-18604

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 19 (USSR)

AUTHOR: Rudkov, A.K.

TITLE: Experiences in the Operation of the Sintering Mill at the im. Dzerzhinskiy Plant (Opyt raboty aglomeratsionnoy fabriki zavoda im. Dzerzhinskogo)

PERIODICAL: Tr. Nauchn.-tekhn. o-va chernoy metallurgii, 1956, Vol 8, pp 206-212

ABSTRACT: The sintering plant produces 2 types of sinter: Bessemer (B) containing P $\leq$ 0.025% and Mn $\leq$ 0.5%, and open-hearth (O), with 3-4.5% Mn. A portion of the ore usually goes to the sintering machine without blending. Ore in the 12-0 mesh fraction is sintered after screening. A large number of proportioning tables at the receiving bins makes it possible to blend the ore at the sintering machine to a single class so that fluctuation of Fe therein is ±1%. A description is provided of the sintering-process flow, and it is shown that the quality of the sinter is determined by holding to an optimum flowsheet for the given mix. The average hourly output in 1953 of the belts (with a sintering area of 50 m^2) was 74.1 t for B and 67.5 t for O.

Card 1/1

F.K.

130-58-4-3/20

AUTHOR: Rudkov, ~~A.K.~~

TITLE: Sinter Production by the Gas Sintering Method (Proizvodstvo aglomerata metodom gazovoy aglomeratsii)

PERIODICAL: Metallurg, 1958, Nr 4, pp 3 - 5 (USSR).

ABSTRACT: The author describes a sintering method in which the mix, containing less carbon than normal, is charged onto the strand and ignited in the normal way. Immediately after leaving the ignition hood, the top of the bed is quenched to a short depth with water sprays and a mixture of blast-furnace gas and air is sucked through the bed. The mixture is applied through a series of hoods but does not ignite until it reaches the hot layer, ignition in the first hood not taking place because of the previous quenching. A sintering machine at the imeni Dzerzhinskogo (imeni Dzerzhinskiy Works) zavod has been converted to the new method (Figure 1), being fitted with eleven hoods covering 44 m^2 of the grate area and has produced 1 200 tons of sinter in test runs. The mix contained 57.44% ore with 59.44% Fe and 11.71% SiO_2, 6.50% flue dust with 40.26% Fe and 12.85% SiO_2, 6.50% limestone with 2.8% SiO_2, 27.44% returns and 2.12% coke breeze; the average carbon and moisture contents

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of the mix were 1.6 - 2.5 and 5 - 5.5%, respectively. Bed height was 185 - 200 mm and the suction (1 000 mm water gauge) was provided by a fan rated at 3 500 m^3/min. Air and gas pressures were 300 mm water gauge, the gas:air ratio being 1:1.15. An insintered top layer 7 - 15 mm deep was produced, which the author considers could be avoided by an ignition temperature higher than the 1 000 °C used. The sinter produced was more reducible but a little weaker than normal. The rates of production achieved (45 tons/hour average, 60 best) could be improved, the author considers, by better design of hoods so as to avoid the ignition of the mixture in them which occasionally occurred during the test and by greater experience. Except for fuel, the costs of the new and conventional processes are about equal, so that the saving of about half the solid fuel consumption must be set against the increased gas consumption for individual values of solid:gas fuel cost ratios. There are 2 figures and 1 table.

ASSOCIATION: imeni Dzerzhinskogo zavod (imeni Dzerzhinskiy Works)

AUTHOR: Rudkov, A.K. SOV/130-58-12-4/21

TITLE: Method for a Rapid Replacement of the Fan Rotor of a 50 m^2 Sintering Machine (Metod skorostnoy zameny rotora eksgaustera aglomashiny 50 m^2)

PERIODICAL: Metallurg, 1958, Nr 12, pp 10 - 11 (USSR)

ABSTRACT: The sinter strands at the sinter plant of the works im. Dzerzhinskogo (im. Dzerzhinskiy) are provided with centrifugal, type D-3500-13 fans rated at 3500 m^3/min. under inlet conditions (1000 mm suction, 150°C temp.) at 1500 rpm. For rapid replacement of the rotor special tackle (Fig 1) has been developed which enables the operation to be carried out in under 4-5 hours by eleven men with one supervisor. The author gives the order in which the operations are carried out and illustrates (Fig 2) the removal of the upper fan main.
There are 2 figures.

ASSOCIATION: Zavod im. Dzerzhinsko (Works imeni Dzerzhinskiy)

Card 1/1

SOV/1[illegible]-59-3-2/32

AUTHORS: Oreshkin, G.G., Plotkin, N.Z. and Rudkov, A.K.

TITLE: Continuous Calcining of Limestone for Adding to Sinter Mixes (Nepreryvnyy obzhig izvestnyaka dlya aglomeratsionnoy shikhty)

PERIODICAL: Stal', 1959, Nr 3, pp 197 - 203 (USSR)

ABSTRACT: In 1957, the authors developed at the Dzerzhinskiy Works a scheme for the calcination of limestone directly on the sinter plant by installing a "round calcining machine" OPR (first letters of the authors' names) in the mix preparation section. The design of the machine is shown in Figure 1. The machine consists of a rotating wind box in the form of a cut-off cone, with the diameter of the large base carrying the sintering grate from 4 - 8 m with a corresponding working surface area from 10 to 40 m^2. The ignition of the mix for calcining consisting of crushed limestone 0-10 mm (oversize of crushed lime after screening-off -3 mm faction for adding to sinter mixes), crushed coke breeze (about 10%) and moisture (3-4%), is done by a row of burners made from tubes 20 mm in diameter with flattened outlets (4-5 mm) fired with coke-oven gas. The calcined lime is transferred to a feeding

Card1/4

Continuous Calcining of Limestone for Adding to Sinter Mixes

table from which it is added to the sinter mix. In order that hot lime (with a temperature of the individual pieces of up to 1 200 - 1 300 °C) does not fall directly onto the conveyor belt, the diameter of the feeding table was increased to 3 m and fitted with two spirals and two knives. The first knife transfers limestone onto the conveyor carrying the sinter mix while the second knife transfers the hot lime on top of the limestone layer. In order to prevent the formation of dust at the discharge of the calcined lime approximately 3/4 of the calcination machine was enclosed into a casing so that the dust is sucked into the calcining layer. Similarly, the place of discharge onto the conveyor level was cased and the casing connected to the exhaust tube. The dust formed during calcining is trapped in a dust catcher (bag) from which it is passed to the feeding table carrying calcined limestone. The position of the calcining machine in the mix preparation department is shown in Figure 2. The influence of suction on the calcining process was investigated on a laboratory-scale apparatus and the results obtained are given in Figure 4. Similar machines with a working area of

Continuous Calcining of Limestone for Adding to Sinter

10 and 15 m^2 are being designed for other sinter plants. An improved design of the machine with upward suction is shown in Figure 5. It is planned that at the Makeyevsk Works the calcined lime will be discharged directly into the mixing drum and at the "Krivorozhstal'" (Krivoy Rog) and "Zaporozhstal'" Works directly onto the conveyor belt already carrying the remaining components of the sinter mix. On the basis of prolonged experience in the operation of the calcining machine the following conclusions are drawn: a) it is advantageous to calcine limestone of the size 0-10 mm (not larger than 15 mm) from oversize after screening -3 mm fraction for the addition to the sinter mix in the raw state; b) the limestone mix should contain 8-10% of carbon and 3-4% of moisture; the size distribution of fuel should be the same as for sintering; c) it is advantageous to carry out the calcining process up to 70-80% of decarbonisation; d) the ignition of the mix can be done with coke-oven gas with a consumption of not less than 40 kcal/ton of the charge; e) for mixing the charge before calcining a worm mixer should be used; charging onto the grate is done with a swinging spout; f) the through-put of the machine of 4 m diameter and 200 mm H_2O suction

Continuous Calcining of Limestone for Adding to Sinter

is up to 150 t/day and can be considerably increased by increasing the capacity of the fan from 30 000 to 40 000 m^3/h and suction of up to 500 mm H_2O; g) as the calcined lime is added hot (500 - 750 °C) its influence on the intensification of the sintering process is higher than that of cold lime; h) on the introduction of the calcination of limestone into the sintering system, the output of sinter increased by 6% (by 10% if compared with the operation without calcined lime); in addition, the dust content of the lime handling places considerably decreased; i) the cost of the machine of 10 m^2 working surface area is about 150 000 roubles and is recovered in a few months of operation. There are 5 figures and 3 Soviet references.

ASSOCIATIONS: Zavod im. Dzerzhinskogo (im. Dzerzhinskiy Works) and Dneprodzerzhinskiy vecherniy metallurgicheskiy institut (Dneprodzerzhinsky Evening Metallurgical Institute)

AUTHOR: Rudkov, A.K., Engineer SOV/133-59-3-5/32

TITLE: Operation of Battery Cyclones at Sinter Plants (Ekspluatatsiya batareynykh tsiklonov aglomashin)

PERIODICAL: Stal', 1959, Nr 3, pp 209 - 210 (USSR)

ABSTRACT: At the sinter plant of the Dzerzhinskiy Works each sinter strand (50 m^2 surface area) is fitted with an exhaust fan D-3500-13 of a capacity of 3 500 m^3 at a suction of 1 000 mm H_2O and a temperature of the waste gases of 150 °C. In order to prevent a rapid wear of the fan rotor, the operation of various types of cyclones was investigated. The general lay-out of the exhaust system is shown in Figure 1 and the designs of the tested elements of the cyclone in Figure 2. It was found that the design g (Figure 2) was most suitable, as the rotor operated for a period of over 3 years during which 2.2 mil. tons of sinter was produced. There are 3 figures.

ASSOCIATION: Zavod im. Dzerzhinskogo (im. Dzerzhinskiy Works)

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75571
SOV/130-59-10-3/20

AUTHOR: Rudkov, A. K. (Chief of Sinter Plant)

TITLE: Automatic Dust Withdrawal from the Dustcatching Bags of Gas Mains and Multicyclones

PERIODICAL: Metallurg, 1959, Nr 10, pp 6-7 (USSR)

ABSTRACT: The special feature of the new design (see Fig. (1), attached) is dust acting as an automatic vacuum gate. The dust is supplied by a pendulum feeder driven by an electric motor. Experimental automatic vacuum gates introduced at zavod imeni Dzerzhinskogo(Plant imeni Dzerzhinskiy) produce satisfactory results. Advantages: (1) elimination of dust escape from gas main and multicyclone; (2) increase in productivity of sinter machine; (3) decrease in exhauster power consumption; (4) reduction in servicing personnel; (5) cut cost of repairs; (6) improved working conditions. There is 1 figure.

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Automatic Dust Withdrawal from the Dustcatching Bags of Gas Mains and Multicyclones

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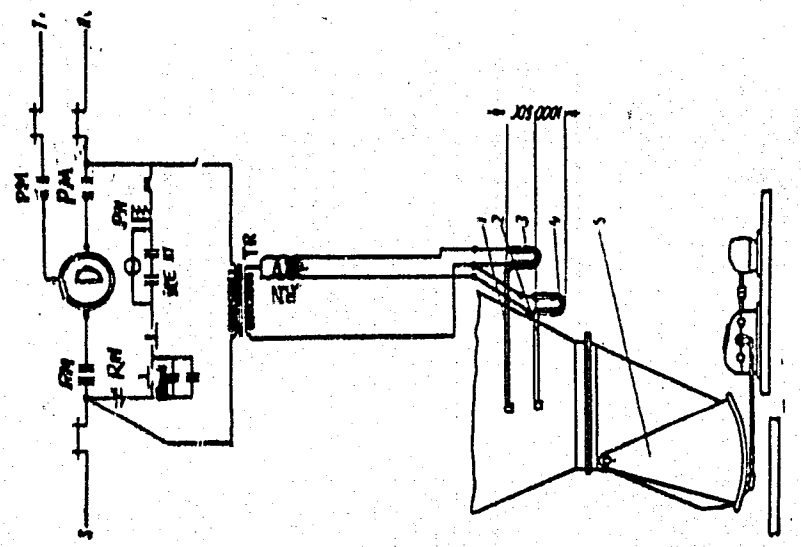

Fig. 1

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See Card 3/3 for Caption to Fig. 1

Automatic Dust Withdrawal from the Dustcatching Bags of Gas Mains and Multicyclones

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SOV/130-59-10-3/20

Fig.1. Automatic vacuum gate: (1) top pipe; (2) bottom pipe; (3) top manometer; (4) bottom manometer; (5) pendulum feeder R, S, T - A. C. phases; RN - coil and relay terminals of bottom pipe; RV - coil and relay terminals of top pipe; TR - transformer; D - electric motor; KE and KT - blocking terminals of feeder with exhauster and dust removal transporter; PM - coil and terminals of magnetic starter.

ASSOCIATION: Plant imeni Dzerzhinskiy (Zavod imeni Dzerzhinskogo)

Card 3/3

RUDKOV, A.K.; PLOTKIN, N.Z.

Work practices at the No.2 Sintering department of the Dneprodzerzhinsk Plant. Stal' 24 no.12:1064-1069 D '64.
(MIRA 18:2)

1. Metallurgicheskiy zavod im. Dzerzhinskogo i Dneprodzerzhinskiy metallurgicheskiy zavod-vtuz im. M.I. Arsenicheva.

RUDKOV, A.K.; KUTSENKO, A.D.; KARPUNIN, A.M.

Ways of raising the quality of railroad rails. Met. i gornorud. prom. no.1:69-70 Ja-F '65. (MIRA 18:3)

YEFIMENKO, G.G., inzh.; VOYTANIK, S.T., inzh.; YEFIMOV, S.P., inzh.; MACHKOVSKIY, A.I., inzh.; RUDKOV, A.K., inzh.; RUDKOVSKIY, G.I., inzh.; Prinimali uchastiye: KOVALEV, D.A.; GOTOVTSEV, A.A.; VASIL'YEV, G.S.; ZEMLYANOY, A.A.; KUKUSHKIN, S.N.; MATYNA, M.G.; LOVCHANOVSKIY, V.A.; KRAMNIK, T.A.; NECHESOVA, N.I.; MARTYNENKO, V.A.; KURAKSIN, D.I.; LETYAGIN, N.L.

Intensifying the sintering process by the use of a special charge wetting device. Stal' 23 no.12:1061-1064 D '63. (MIRA 17:2)

1. Dnepropetrovskiy metallurgicheskiy institut, zavod im. Dzerzhinskogo i Yuzhnyy gornoobogatitel'nyy kombinat. 2. Dnepropetrovskiy metallurgicheskiy institut (for Kovalev, Gotovtsev, Vasil'yev, Zemlyanoy, Kukushkin). 3. Zavod im. Dzerzhinskogo (for Matyna, Lovchanskiy, Kramnik, Nechesova). 4. Yuzhnyy gornoobogatitel'nyy kombinat (for Martynenko, Kuraksin, Letyagin).

RUDKOV, G.V., inzh. (g.Zhdanov); KAZ'YAN, N.G., inzh. (g.Zhdanov)

Improving the efficiency of the TE3 diesel locomotive. Zhel. dor. transp. 47 no.1:59-60 Ja '65. (MIRA 18:3)

RUDKOV, G.V.; BELYAYEV, A.G.

Our method for reconditioning the jacket of M753 diesel engine cylinders. Elek. i tepl.tiaga 7 no.11:17 N '63. (MIRA 17:2)

1. Zamestitel' nachal'nika Kustovogo proyektno-tekhnologicheskogo otdela po remontu i ekspluatatsii teplovozov pri zavode im. Il'icha, Zhdanov (for Rudkov). 2. Starshiy inzh. Kustovogo proyektno-tekhnologicheskogo otdela po remontu i ekspluatatsii teplovozov pri zavode im. Il'icha, Zhdanov (for Belyayev).

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Letter to the editor. Elek. i tepl.tiaga no.8:41 Ag '63. (MIRA 16:9)

1. Zavod im. Il'icha v Zhdanove (for Bunkin).
(No subject headings)

RUDKOV, G.V.; LUKASHEVICH, V.P.

Use of diesel locomotives with hydraulic drive in industrial enterprises. Zhel.dor.transp.44 no.3:75-76 Mr '62. (MIRA 15:3)

1. Nachal'nik reklamatsionnogo byuro zavoda im. F.E.Dzerhinskogo, g.Murom (for Rudkov). 2. Zamestitel' nachal'nika mekhanosborochnogo tsekha zavoda im. F.E.Dzerzhinskogo, g. Murom (for Lukashevich).
(Diesel locomotives--Hydraulic drive)(Railroads,Industrial)

RUDKOV, G.V.

How to improve the performance of heating boilers of TGM1 diesel locomotives. Elek.i tepl. tiaga 5 no.10:39 O '61. (MIRA 14:10)

1. Nachal'nik reklamatsionogo byuro zavoda im. F.E.Dzerzhinskogo, g. Murom.

(Diesel locomotives)
(Boilers)

RUDKOV, G.V.

Recommendations on the maintenance of the diesel engine of TGM1 diesel locomotives. Elek.i tepl.tiaga 6 no.1:14-16 Ja '62. (MIRA 15:1)

1. Nachal'nik reklamatsionnogo byuro Muromskogo zavoda im. F. E. Dzerzhinskogo.
(Diesel engines--Maintenance and repair)

ZAV'YALOV, G.N.; KRYLOV, V.I.; OZOLIN, A.K.; RUDKOV, G.V.; KHATSKELEVICH, M.N., inzh.

Replies to the inquiries of our readers. Elek.i tepl.tiaga 7 no.1:43-44 Ja '63. (MIRA 16:2)

1. Glavnyy tekhnolog po avtotormosam Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya (for Zav'yalov). 2. Nachal'nik tormoznoy laboratorii Moskovskogo tormoznogo zavoda (for Krylov). 3. Zamestitel' nachal'nika spetsial'nogo konstruktorskogo byuro Moskovskogo tormoznogo zavoda (for Ozolin). 4. Zamestitel' nachal'nika proyektno-tekhnologicheskogo otdela po remontu i ekspluatatsii teplovozov pri zavode im. Il'icha (for Rudkov).

(Railroads--Signaling) (Diesel locomotives)

RUD'KOV, V.F.

Basic trends in the development of medical equipment in stomatology. Med.prom. 16 no.6:3-7 Jl '62. (MIRA 15:12)

1. Glavnyy stomatolog Ministerstva zdravookhraneniya SSSR.
(STOMATOLOGY--EQUIPMENT AND SUPPLIES)

RUDKOVA, S.I.; ROZHNOVA, R.T.; FILIMONOVA, A.Ya.

Food poisoning. Zhur. mikrobiol. epid. i immun. 31 no. 5:119 My '60.
(MIRA 13:10)

1. Iz Kuybyshevskogo meditsinskogo instituta.
(FOOD POISONING)

SOKOLOVÁ, T.A.; RUDKOVSKAYA, G.D.

Cyclic polymerization. Part 1: N-Methyldimethacrylamide. Vysokom. soed. 3 no.5:706-710 My '61. (MIRA 14:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Methacrylamide)

SOKOLOVA, T.A.; RUDKOVSKAYA, G.D.

Synthesis of N-Substituted methacrylamides. Part 6: N-methyldimethacrylamide. Zhur.ob.khim. 31 no.7:2224-2226 Jl '61. (MIRA 14:7)

1. Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR.

(Methacrylamide)

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AUTHORS: Sokolova, T.A., and Rudkovskaya, G.D.

TITLE: Synthesis of N-substituted methacrylamides. VI. N-methyl dimethacrylamide

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 7, 1961, 2224 - 2226

TEXT: N-methyl dimethacrylamide has been synthesized by two different methods. The investigation was carried out in the absence of any information on the compound. N-methyl dimethacrylamide (MDMA) was prepared by heating N-methyl methacrylamide with methacrylic acid anhydride (MAA), and by heating methylamine hydrochloride with excess methacrylic acid chloride (MAC). On heating equimolar quantities of CH_3NH_2HCl with MAC in a solvent, the main product is a monoacylated derivative. Hitherto, the latter method has been described for obtaining only monoacrylated amines. Preparation of MDMA is then described. About 30 % yield of MDMA was obtained. This was

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